

Amendment and Response

Applicant: Ralf Brederlow et al.

Serial No.: 10/562,458

Filed: June 29, 2006

Docket No.: I432.128.101/P31912

Title: ELECTRONIC COMPONENT WITH ID TAGS

REMARKS

The following remarks are made in response to the Non-Final Office Action mailed December 8, 2009. Claims 12-31 were rejected. With this Response, claim 32 is added. Claims 12-32 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 102

The Examiner rejected claims 12-20 and 22-30 under 35 U.S.C. § 102(b) as being anticipated by the Noto U.S. Patent No. 5,731,691. Applicant respectfully disagrees.

Claim 12 is an electronic component operable with an AC voltage. The electric component includes at least one input, at least one output, and a pair of *functionally identical electronic sub-components*, wherein the functionally identical electronic sub-components *are connected in parallel*. The at least one input of the electronic component is connected to a respective input of the two functionally identical electronic sub-components. The at least one output of the electronic component is connected to a respective output of the two functionally identical electronic sub-components. The electronic component is configured such that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage. This is not taught or suggested in the art of record.

The subject-matter of independent claim 12 relates to an electronic component that can be operated by means of an alternating (AC) voltage. Electronic sub-components with an identical function to the electronic component are alternatingly driven by the *first half-wave of the AC voltage* and the *second half-wave of the AC voltage*, respectively.

The Noto patent cited by the Examiner describes a transponder power supply circuitry 3, which is connected to an antenna and a response circuit. A DC power is fed to the response circuit and is generated by a rectifier circuit, which includes a rectifier diode 5, a flywheel coil 6, a smoothing capacitor 7 and a limiter circuit 8, which has two ordinary diodes 8a and 8b which are connected *anti-parallel* to each other.

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The claim features a *parallel* connection between functionally identical electronic sub-components. This is explained, for example, in paragraph [0060], and illustrated in FIG. 1 and FIG. 6 of the published Specification.

For reference, paragraph [0060] states:

[0060] The two functionally identical electronic sub-components of a pair are used in parallel in order to achieve satisfactory operation of the electronic component during the two half-waves of an AC voltage (emphasis added).

This difference is identified in claim 12 as:

a pair of functionally identical electronic sub-components, wherein the functionally identical electronic sub-components are *connected in parallel* (emphasis added)

Under item 4 of the above-mentioned Office Action, the pair of functionally identical electronic sub-components, which are asserted to be connected in parallel, are related to the ordinary diodes 8a and 8b of the limiter circuit 8. However, the connection of the diodes 8a and 8b is anti-parallel, and is quite the opposite of *parallel*. The p-region of diode 8a is coupled to the n-region of diode 5, and the n-region of diode 8a is coupled to ground, while oppositely, the n-region of diode 8b is coupled to the n-region of diode 5, and the p-region of diode 8a is coupled to ground. Because this is *anti-parallel*, and opposite to parallel, the Noto patent fails to teach or suggest all the elements of independent claim 12.

Furthermore, one of the issues underlying claim 12, as described in paragraph [0016] of the description, is that the conventional ID tag requires a relatively large surface area, since a rectifier circuit must be arranged on the chip of the ID tag. Since the Noto patent maintains the use of a rectifier and merely changes the conventional rectifier diode by a rectifier diode, which can be driven with a reverse current, the Noto patent does not give any hint for solving the above-mentioned issue underlying claim 12. Hence, independent claim 12 is neither anticipated nor suggested by the Noto patent.

Due to an analogue argumentation, also independent claim 22 is neither anticipated nor suggested by the Noto patent. Claim 32 is also added and this distinction is further clarified. In

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addition, claims 13-20 and 23-30, which are dependent from independent claims 12 and 22, are neither anticipated nor suggested by the Noto patent for the same reasons. Therefore, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 102(b) rejection to the claims, and request allowance of these claims.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejected claims 21 and 31 under 35 U.S.C. § 103(a) as being unpatentable over the Noto U.S. Patent No. 5,731,691 in view of the Baude et al. U.S. Patent Application Publication No. 2004/0119504 and further in view of the Bayron et al. U.S. Patent No. 5,769,051.

Claim 21 depends from independent claim 12 and claim 31 depends from independent Claim 22. Applicant respectfully directs the Examiner to the 102(b) rejection above where Applicant identifies the differences between the elements of claim 12 and the Noto patent.

As argued above, since the Noto patent does not give any hint for solving the issues underlying independent claim 12, it would be unlikely that person skilled in the art would take into account the Noto patent.

Furthermore, even person skilled in the art would combine the Noto patent with the Baude et al. publication, it would be unclear how to combine the AC-voltage driven inverter and oscillator circuits of the Baude et al. publication with the voltage limiter of the Noto patent.

It would be not clear how to integrate the AC-voltage driven inverter and oscillator circuits of the Baude et al. publication into the voltage limiter of the Noto patent, to which the Examiner refers with respect to the functionally identical electrical sub-components and which functional advantage this integration would involve.

Therefore, the subject-matter of claim 12 is not obvious over the Noto patent in view of the Baude et al. publication.

The Bayron et al. patent discloses an encoder configured for time-encoding. The Bayron et al. publication however, does not teach other limitations associated with the dependent claims 21 and 31.

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Claim 21 and claim 31 are dependent on independent claims 12 and 22 respectively, and as stated above, the combination of the Noto patent, the Baude et al. publication and the Bayron et al. patent fails to teach the limitations of claim 12 and 22.

Applicants' state that claims 21 and 31 cannot be obvious in view of any combination of the Noto patent, the Baude et al. publication and the Bayron et al. patent. Therefore, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection to the claims, and requests allowance of these claims.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 12-32 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 12-32 are respectfully requested.

Applicant hereby authorizes the Commissioner for Patents to charge Deposit Account No. 50-0471 in the amount of \$52.00 to cover the fees as set forth under 37 C.F.R. 1.16(h)(i). No additional fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Paul P. Kempf at Telephone No. (612) 767-2502, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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